

COURTSHIP OF COMMON CARACARAS IN COSTA RICA

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Between 8 and 16 January, 1978, I studied the courtship of a pair of Common Caracaras (*Caracara cheriway*) building a nest, concealed by leaves and ca 35 m up in the top of a tree (unidentified) that grew in front of the Palo Verde station of the Organization of Tropical Studies in Guanacaste, Costa Rica. I made observations with 8 × 30 binoculars, spending 4 to 5 h per day for 9 days, aided by my wife, Jane Kilham. Although I could not tell the sexes apart at a distance, I could distinguish the male (identified at times of copulation) from the female when the two were perched close to one another (a) by his being smaller and (b) having less barring on his white breast. Behavior either not previously undescribed (Bent 1938, Brown and Amadon 1968) or described in minimal detail is presented here.

Foraging. The nest tree and all of the main perching trees of the caracaras were at the edge of a tropical dry forest bordering a marsh teeming with waterfowl. As far as I could determine all foraging was done over the marsh and mostly by the male. Of 13 items brought in, 11 were definitely, and 2 probably, birds. All of these were partially plucked or dismembered by the time I saw them. Two of the heads recovered seemed to be those of Blue-winged Teal (*Anas discors*). I could not tell whether the prey was captured alive or found dead. The diet of birds was apparently unusual. I have encountered two reports of caracaras catching live birds, one by Layne et al. (1977) for Common Caracaras catching Cattle Egrets (*Bulbulcus ibis*) and one by Myers (1978) on the catching of Southern Lapwings (*Vanellus chilensis*) by the Crested Caracara (*Polyborus plan-cus*).

A neighboring pair of caracaras inhabiting a dry cattle pasture were seen feeding on carrion (once an iguana and once a tree porcupine) in the manner described by Glazener (1964) for Common Caracaras in Texas.

Transfer of prey. The female caracara began making "wuck" vocalizations on 15 January when the male, carrying the carcass of a bird in his beak, came from the marsh to the tree where she was perching. The female walked along the large limb where the two perched and took half the prey from him. Both birds then fed by holding the prey down with one foot. When the female finished, she took the remains from her mate. After a few minutes the male walked over and took part of this back again. When the female had finished her second portion, she again took the male's portion. The male yielded his portion to her three times without overt signs of being disturbed. On four of the five occasions when I saw the female feeding, it was when she took the prey from the male in this manner. On the fifth occasion the male flew with a portion of a carcass to the large, nearly horizontal limb where his mate was standing and immediately walked over to give the prey to her. Then, as she stood with head lowered and the prey in her beak, he mounted in an incomplete copulation.

Taking prey remains to the nest. On seven occasions the caracaras brought prey remains, which consisted of nothing but bones and tendons, to the nest. On five of these

the bird bringing the debris waited 13 to 20 min before its partner left, whereupon it deposited the material.

Presumably the remains were being used to line the nest, for the caracaras were also bringing in sticks at this time. I could not reach the nest because the branches at the very top of the tree, where the nest was located, were too small for climbing.

Perching and allopreening. The caracaras, especially the female, spent much of each day perching in trees overlooking the marsh. I saw the pair allopreen 6 times. The events on 16 January were representative. The female had finished feeding. Shortly thereafter the male finished, and he approached the female and perched within a few inches of her. When she put her head down, he nibbled at the feathers of her crown. After both birds had preened individually for a few minutes, the male presented the side of his neck and she nibbled at it. More individual preening ended when she again put her head down for him to preen. The male had thus preened the female twice to her once, a consistency shown in other sessions. The two caracaras, when resting and preening, often perched within 30 cm of each other.

Copulatory behavior. I witnessed four incomplete copulations—two on the limb where the pair fed, one on a small tree top in the marsh, and one (not well seen) on the nest. In three of the four the male alighted on the back of the female without preliminaries, staying on for about 4 seconds. In the fourth episode the male first presented his mate with food, then mounted while she held the prey in her beak, as described above.

Vocalizations. The only vocalizations heard were low, single "wuck" or "g-wuck" notes. The notes were given when one caracara was approaching the other, either with prey, or with debris when one partner was on the nest. Strong winds in the area made study of vocalizations difficult. I never heard the cry, described by Bent (1938) and Slud (1964) that is given from some high perch with a backward toss of the head.

Conflict. One of the pair pursued an intruding caracara on two occasions. When the intruder flew near the nest, the two caracaras with claws outstretched, beat their wings as they tried to grapple with each other in the air.

In summary, the birds did little flying other than to forage over the marsh. No display flights were observed. The birds often perched close to one another and allopreened, usually after the male had brought prey to the female and both birds had fed. There were no preliminaries to incomplete copulations in three instances but presentation of prey by the male preceded a fourth. The female assumed no consistent precopulatory pose.

Acknowledgments

I am obliged to James N. Layne and to David H. Ellis for reading and commenting on my observations.

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AN OBSERVATION OF THE AERIAL COURTSHIP OF THE RED-TAILED HAWK

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On April 5, 1976, while in an observation blind 35 feet from a Red-tailed Hawk nest at Alum Creek Reservoir in Delaware County, I observed the aerial courtship of the Red-tailed Hawk (*Buteo jamaicensis*). As the pair flew into the thermals, both hawks participated in dives, barrel rolls, and ascents. While coming out of independent dives, the birds were observed to make contact with their talons. During the three-second contacts, the birds spiraled downward and then separated. Typical dives and ascents followed each of the two encounters. As the female began to return to the nest, the smaller male approached her from above. With legs and tail extended downward, he dropped down and grasped the back of the female. She responded by raising her tail. The copulation lasted about two seconds after which both birds returned to the nest tree where normal copulatory behavior commenced.

Conner (1974, *Bird Banding*, Summer Vol., p. 269) noted that the male of a pair of Red-tailed Hawks made aerial contact with its mate, but the female did not respond by lifting her tail.